



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/599,735	06/23/2000	Noaki Watanabe	501.38590X00	1503
20457	7590	06/30/2004	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889			LIANG, GWEN	
			ART UNIT	PAPER NUMBER
			2172	
DATE MAILED: 06/30/2004				

23

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/599,735	WATANABE ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	GWEN LIANG	2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### **Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 14 May 2004.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-11,14-18 and 20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) 20 is/are allowed.

6)  Claim(s) 3,6-11 and 14-18 is/are rejected.

7)  Claim(s) 1,2,4,5 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892) 4)  Interview Summary (PTO-413)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. \_\_\_\_ .  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_ .  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_ .

### **DETAILED ACTION**

1. This action is responsive to communications: Amendment E, filed on 4/14/2004 and Request for Continued Examination filed on 5/14/2004. Claims 1-11, 14-18 and 20 are pending.

#### *Claim Objections*

2. Claims 1-10 are objected to because of the following informalities:

In independent claim 1, the claim language "wherein said control unit receives a function execution request, requesting execution of one of the function programs, from the server computer, ..." in lines 10-12 needs to be changed to clearly show the claimed subject matter. The examiner suggests that the claim language be changed to "wherein said control unit receives a function execution request from the server computer, requesting execution of one of the function programs, ..." .

In claim 7, the word "said" in the claim language "said the selected function program" in line 4 needs to be deleted.

#### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3, 6-11 and 15-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "disk units" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim. The limitation " disk units" is not exactly found in any of the preceding features in the claim.

Claim 6 recites the limitation "the case" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claims 7 and 8 are similarly rejected based on the reasons given for claim 6.

Claim 15 recites the limitation "the server" in line 8 of the claim. There is insufficient antecedent basis for this limitation in the claim. The limitation "the server" is not exactly found in any of the preceding features in the claim.

Claim 15 recites the limitation "the function" in line 13 of the claim. There is insufficient antecedent basis for this limitation in the claim. The limitation " the function " is not exactly found in any of the preceding features in the claim.

Claim 16 recites the limitation "the selected function program" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 is similarly rejected based on the reasons given for claim 16.

***Allowable Subject Matter***

5. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

6. Claim 20 is allowed and claims 1-11 and 15-18 would be allowable if rewritten or amended to overcome the objections of minor informalities and/or the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The following is an examiner's statement of reasons for allowance:

In independent claim 1, the limitation of "a control unit ... wherein said control unit receives one of the function programs from the server computer and stores the received function program into the memory, wherein said control unit receives a function execution request ... from the server computer, selects the requested function program from the memory, selects the function information in connection with the selected function program, and executes the selected function program according to a condition described in the selected function information,

wherein the function execution request is sent from the client computer to the server computer to request execution of one of the function programs, and wherein said control unit examines, based on the selected function information whether an access from external of said disk unit to the data stored in said disk storage media is allowable and restricts accesses to the data stored in the disk storage media from external of said disk unit during execution of the selected function program.", taken with the other limitations of the claim, were not disclosed by, would not have been obvious over, nor otherwise fairly disclosed by the prior art of record.

In independent claim 15, the limitation of "receiving, in a disk unit, a function program and function information relating to execution of the function program from the server; executing, in said disk unit, the function program in response to a function

execution request from the client computer as per the function information; and examining, in said disk unit, based on the function information, accesses from external of said disk unit to the data stored in said disk storage media and restricting the access during execution of the function", taken with the other limitations of the claim, were not disclosed by, would not have been obvious over, nor otherwise fairly disclosed by the prior art of record.

In independent claim 20, the limitation of "A client/server system ... wherein said client computer requests execution of a function program by said server computer, wherein said server computer creates function information relating to execution of the function program that has been requested from said client computer, and wherein a disk unit receives the function program and the function information from the server computer, executes the function program as per the function information and examines, based on the function information, accesses from external of said disk unit to the data stored in said disk storage media and restricts the accesses during execution of the function program", taken with the other limitations of the claim, were not disclosed by, would not have been obvious over, nor otherwise fairly disclosed by the prior art of record.

*Response to Arguments*

7. Applicant's arguments regarding Claim 14 have been fully considered but they are not persuasive.

Applicant's arguments regarding that the Examiner states that "the limitation of 'a control unit ...wherein said control unit receives one of the function program from the

server computer'" is one of the reasons for allowance of the claims 1-10, 15-18 and 20 and that since this limitation is now recited in claim 14, claim 14 now recites features identified by the Examiner as distinguishing the present invention from that taught by the references of record have been fully considered but they are not persuasive. The reasons for allowance of the other claims are not based on only one limitation, but rather a combination of a plurality of limitations Furthermore, this newly added limitation is rejected as reasons stated for claim 14 in this office action, Lei teaches in column 7 various functions, some built-in and some user-defined, which are considered to be functions received by the control unit of the server. The server as a whole can be viewed as a disk unit as claimed, since it is inherent that a server contains a disk storage media and a control unit to control all the function execution.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Lei et al., "Lei" (U.S. Patent No. 6,487,552).

With respect to claim 14, Lei discloses a disk unit comprising:

disk storage media to store data (See for example: col. 5 lines 24-26, "A storage device 110, such as a magnetic disk or optical disk, is provided and coupled to bus 102 for storing information and instructions."); Fig. 1 element 110 "STORAGE DEVICE"); and

a control unit (See for example: Fig. 2, wherein the contents and process control indicated in the "SERVER SIDE" box illustrates a control unit), wherein said control unit receives a plurality of function programs (See for example: col. 7 lines 6-12, wherein the GetContextValue is a "built in" function of the database server; col. 7 lines 18-22; In the first of the queries, My\_department is a user defined function to get the department number for the user with USER\_ID. In the second query, the GetContextValue function is invoked to retrieve the value of a context variable that indicates the department number of the current user"; wherein a plurality of function programs are received by said control unit.)

wherein said control unit receives function execution requests and user ID information from a client unit via a network to request execution of one of a plurality of function programs, selects the requested function program (See for example: col. 8 lines 46-56, "Examples of information that, taken collectively, makes up the context of a query include: the session\_id of the session in which a query is received the user\_id of the user that initiated the session the type of access required by the query (insert, update, select, delete) the type of application used to issue the query the IP address identified in the message containing the query the session environment (including the actual date/time, enabled roles, etc.)", wherein the query - insert, update, select delete - received from the user is equivalent to function execution requests received from a

client. The IP address used in identifying the message makes it obvious that the request is received via a network.), and

wherein said control unit, based on said user ID information, creates function information to examine accesses from external of said disk unit to an access area for data stored in said storage media at each function execution request, selects the function information in connection with the selected function program, executes the selected function program as per the selected function information and examines accesses from external of said disk unit to the access area based on said function information, and restricts the access (See for .example, col. 14 lines 27-43, 'For example, assume that the access policy of table t is that everyone is allowed to see all of the records in their own department, but can only modify the records that apply to themselves. Further, assume that access to table t is only allowed on weekdays (Monday-Friday), unless the access is performed by a database administrator. The logic used by the policy function that implements this policy could be: if

```
GetContextValue(access_type)=modify then  
add_predicate("t.user_id=GetContextValue(user_id)") else  
add_predicate("t.dept_no=GetContextValue(dept_id); if  
((GetContextValue(today)=Saturday) or (GetContextValue(today)=Sunday)) and  
(GetContextValue(user_type)<>dba) then add_predicate("1=2")').
```

10. Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Wiederhold (U.S. Patent No. 6,226,745).

With respect to claim 14, Wiederhold discloses a disk unit comprising:

disk storage media to store data (See for example: Fig. 2 "Medical Database"); and

a control unit (See for example: Abstract "A security mediator system is used in a computer system having a database of information to be shared with authorized users in accordance with pre-defined constraints."; Fig. 2 "Security mediator", which is equivalent to a control unit),

wherein said control unit receives function execution requests and user ID information from a client unit via a network to request execution of one of a plurality of function programs, selects the requested function program (See for example: Abstract, "The rules database includes data for specifying, for each of a plurality of specified groups of users, which of the rules in the rules database are applicable to queries received from users in each of the groups. A query pre-processing module applies to each received query all pre-processing rules in the rules database applicable to the query in accordance with the identified user who submitted the query. ... A database access module executing each enabled query to produce a corresponding result."); col. 9 lines 12-15, "In other words, if users can issue project-select-join queries, then they can perform project, select, and join operations on a sequence of answers."), and

wherein said control unit, based on said user ID information, creates function information to examine accesses from external of said disk unit to an access area for data stored in said storage media at each function execution request, selects the function information in connection with the selected function program, executes the selected function program as per the selected function information and examines

accesses from external of said disk unit to the access area based on said function information, and restricts the access (See for example: Abstract, "The rules database includes data for specifying, for each of a plurality of specified groups of users, which of the rules in the rules database are applicable to queries received from users in each of the groups. A query pre-processing module applies to each received query all pre-processing rules in the rules database applicable to the query in accordance with the identified user who submitted the query. If any applicable rule is not passed, the query is blocked; otherwise execution of the query is enabled. A database access module executing each enabled query to produce a corresponding result.").

**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GWEN LIANG whose telephone number is 703-305-3985. The examiner can normally be reached on 9:00 A.M. - 5:30 P.M. Monday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN BREENE can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

G.L.  
22 June 2004

  
JEAN M. CORRIELUS  
PRIMARY EXAMINER